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**REMARKS**

Claims 1-4 are rejected, under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,104,323 to Hansen for an ADHESIVE COMPOSITION CONTAINING A PRE-BLENDED POLYPHENYLENE ETHER RESIN, hereafter referred to as "Hansen". The Applicant acknowledges and respectfully traverses the raised rejection in view of the following remarks.

Claims 1-4 are further rejected under 35 U.S.C. § 103(a) as being unpatentable over WO '396 for ADHESIVE COMPOSITIONS CONTAINING LOW MOLECULAR WEIGHT POLYPHENYLENE OXIDES. The Applicant acknowledges and respectfully traverses the raised rejection in view of the following remarks.

It will also be noted that the subject matter of original claims 1-4 have been amended to clarify the distinguishing elements of the invention and now appear in amended form as new claims 5-8. Also, and after review of the prior art cited by the Examiner, the Applicant has added new claims 9-14 commensurate with the scope of protection to which the Applicant feels the invention to be entitled. The amendments to claims 5-8, originally claims 1-4, and the recitations of claims 9-14 are fully supported by the specification of the present application as originally filed, so that no new matter has been added by what of these amendments or the new claims. It will also be noted that the independent claims of claims 5-14 fully recite the distinctions of the present invention over the cited prior art, as discussed below.

The present invention is directed to a hot melt composition and a method for using the hot melt composition wherein the exclusion of a tackifying resin from the composition results in a composition having adhesive properties sufficient for use of the composition as an adhesive while having an enhanced disassembly property such that members that have been connected by the hot melt composition are readily disassembled. As recited in the independent claims, the hot melt composition is comprised only of a high-molecular weight styrene block copolymer having a number average molecular weight ( $M_n$ ) of 100,000 or more, one of a polyphenylene

ether resin or a modified polyphenylene ether resin having one of a thermal deformation temperature and a glass transition temperature of 120°C or above, and a viscosity adjuster.

Considering the prior art cited by the Examiner, the teachings of Hansen are directed to an adhesive compound containing a blend of a polyphenylene ether resin and a low molecular weight resin, a monoalkenyl arene/conjugated diene block copolymer and a tackifying resin and wherein the inclusion of the low molecular weight resin provides an adhesive having an improved high temperature performance.

The present invention as described and as recited in the claims as amended herein are thereby distinguished over and from the teachings of Hansen under the requirements and provisions of 35 U.S.C. § 103 for a number of reasons. For example, the object of Hansen is to achieve an adhesive having improved high temperature characteristics while the object of the present invention is to obtain an adhesive having adequate adhesive properties but improved disassembly characteristics. These differing goals, in turn, lead to significant differences in the composition and properties of the two adhesives.

In this regard, and in fundamental distinction between the teachings of Hansen and the present invention, it must be noted that Hansen includes and is required to include two different resins, the first being a polyphenylene ether resin and the second being the lower molecular weight resin that is necessary to provide the desired temperature characteristics. In fundamental contrast from Hansen, the hot melt composition of the present invention includes only a single resin, which may be either a polyphenylene ether resin or a modified polyphenylene resin.

In further distinction between the present invention and Hansen, the hot melt composition of the present invention includes a high-molecular weight styrene block copolymer, such as a styrene-ethylene-1-butene-styrene block copolymer or a styrene-ethylene-propylene-styrene block copolymer. In contrast, the Hansen composition includes a monoalkenyl arene/conjugated diene block copolymer which, while generally a block copolymer, is a different

copolymer having different properties from the high-molecular weight styrene block copolymer of the present invention.

In a yet further fundamental contrast between the present invention and the teachings of Hansen, it must be noted that Hansen specifically requires that the composition include a tackifying resin to provide the adhesive properties of the composition. In contrast, the hot melt composition of the present invention does not require a tackifying resin to provide the adhesive properties of the composition, and in fact specifically teaches away from and excludes the use of a tackifying resin. As described in the present application and as recited in the claims as amended herein, it is the exclusion of a tackifying resin from the composition of the present invention that provides the enhanced disassembly properties of the hot melt composition of the present invention.

In this regard, it will be noted that the claims as amended herein contain recitations specifically excluding tackifying resins from the hot melt composition of the present invention. The claims as amended herein thereby fully distinguish the hot melt composition of the present invention over and from the compositions of the cited prior art with respect to a fundamental ingredient of the compositions of the cited prior art, and by the resulting properties of the hot melt composition of the present invention. Claims 5-14 recite the limitation that the ingredients of the composition comprise only the specifically recited ingredients, which do not include a tackifying resin. Claims 9-14 then contain the additional recitation that tackifying resins are specifically excluded from the composition and that the exclusion of tackifying resins results in certain properties of the composition.

The Applicant also respectfully disagrees with the Examiner's statement that a tackifying resin will inherently reduce the compression set of a composition, such as Hansen's composition. It is the Applicant's belief and position that a tackifying resin will tend to soften and fluidize a composition containing the tackifying resin, and will thereby tend to increase the

compression set of the composition, which is in direct contrast to the composition described and claimed by the Applicant.

Also in this regard, the Examiner refers to the tackifying resin taught and used by Hansen as a "viscosity adjuster", as used in the present invention. Hansen, however, specifically and clearly describes and recites the use of a tackifying resin, which is a fundamentally different component than a viscosity adjuster that has fundamentally different properties than does a viscosity adjuster. For example, a viscosity adjuster modifies the flow properties of a composition while a tackifying resin effects and provides the adhesive properties of a composition.

It is, therefore, the belief and position of the Applicant that the claims of the present application as amended herein are completely and patentably distinguished over and from the teachings of Hansen under the requirements and provisions of 35 U.S.C. § 103. The Applicant accordingly respectfully requests that the Examiner reconsider and withdraw the rejection of the claims as amended herein over Hansen under 35 U.S.C. § 103.

Next considering WO '396, WO '396 is directed to a hot melt adhesive composition having improved high temperature adhesive properties. According to WO '396, the composition must specifically include a block copolymer having at least two monoalkenyl arene endblocks and at least one elastomeric conjugated-diene midblock, a low molecular weight polyphenylene oxide polymer, and a compatible tackifying resin.

It will, therefore, be apparent that the present invention as described and as recited in the claims is distinguished over and from WO '396 under the requirements and provisions of 35 U.S.C. § 103 for essentially the same reasons that the present invention is distinguished over Hansen. That is, and for example, the object of WO '396 is to achieve an adhesive having improved high temperature characteristics while the object of the present invention is to obtain an adhesive having adequate adhesive properties but improved disassembly characteristics.

These differing goals, in turn, lead to significant differences in the composition and properties of the two adhesives.

In example of a distinction arising from the different objects of the present invention and WO '396, the composition of the present invention includes a high-molecular weight styrene block copolymer, such as a styrene-ethylene-1-butene-styrene block copolymer or a styrene-ethylene-propylene-styrene block copolymer. In contrast, the WO '396 composition must specifically include a block copolymer having at least two monoalkenyl arene endblocks and at least one elastomeric conjugated-diene midblock, thereby fundamentally distinguishing the teachings of WO '396 from the present invention.

In further distinction between the present invention the teachings of WO '396, the hot melt composition of the present invention further includes a polythienylene ether resin, which may be either a polyphenylene ether resin or a modified polyphenylene resin. In contrast, WO '396 specifically teaches and requires the use of a low molecular weight polyphenylene oxide polymer, thereby again fundamentally distinguishing the present invention over and from the teachings of WO '396.

In a yet further fundamental contrast between the present invention and the teachings of WO '396, WO '396 specifically requires that the composition include a tackifying resin to provide the adhesive properties of the composition. In contrast, the hot melt composition of the present invention does not require a tackifying resin to provide the adhesive properties of the composition, and in fact specifically teaches away from and excludes the use of a tackifying resin. As described in the present application and as recited in the claims as amended herein, it is the exclusion of a tackifying resin from the composition of the present invention that provides the enhanced disassembly properties of the hot melt composition of the present invention.

As discussed above, the claims as amended herein specifically exclude tackifying resins from the hot melt composition of the present invention, thereby fully distinguishing the present

invention over and from the compositions of the cited prior art with respect to a fundamental ingredient of the compositions of the cited prior art and by the consequent properties of the hot melt composition of the present invention.

The Applicant also respectfully disagrees with the Examiner's statement that a tackifying resin will inherently reduce the compression set of a composition, such as that taught in WO '396. As stated with regard to Hansen, it is the Applicant's belief and position that a tackifying resin will tend to soften and fluidize a composition containing the tackifying resin, and will thereby tend to increase the compression set of the composition, which is in direct contrast to the composition described and claimed by the Applicant.

It is, therefore, the belief and position of the Applicant that the claims of the present application as amended herein are completely and patentably distinguished over and from the teachings of WO '396 under the requirements and provisions of 35 U.S.C. § 103. The Applicant accordingly respectfully requests that the Examiner reconsider and withdraw the rejection of the claims as amended herein over WO '396 under 35 U.S.C. § 103.

Lastly, and in consideration of a possible combination of the teachings of Hansen in view of WO '396, or the reverse, it must be noted that WO '396 specifically distinguishes between the teachings and invention of WO '396 and the teachings and invention of Hansen, such as at page 2, line 19 through page 3, line 6. The combination of Hansen and WO '396 would, therefore, not occur to one of ordinary skill in the relevant arts under the requirements and provisions of either 35 U.S.C. § 102 or 35 U.S.C. § 103.

In view of the foregoing, it is respectfully submitted that the raised rejection(s) should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until allowable subject matter is indicated for this case.

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Respectfully submitted,

  
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